



MIDWEST WIRELINE

DUAL INDUCTION LOG

Company Carmen Schmitt, Inc.

Well Dairy #1-13

Field

County Thomas

State Kansas

Company Carmen Schmitt, Inc.
Well Dairy #1-13
Field
County Thomas
State Kansas

Location: API #: 15-193-21105-00-00

NE NW NW SE
2475 FSL & 2050 FEL
SEC 13 TWP 7S RGE 32W

Other Services

CNL/CDL
MEL

Permanent Datum Ground Level Elevation 3025
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Elevation
K.B. 3030
D.F.
G.L. 3025

| | |
|------------------------|---------------|
| Date | 8/6/2022 |
| Run Number | One |
| Depth Driller | 4705 |
| Depth Logger | 4705 |
| Bottom Logged Interval | 4704 |
| Top Log Interval | 250 |
| Casing Driller | 8.625 @ 264 |
| Casing Logger | 264 |
| Bit Size | 7.875 |
| Type Fluid in Hole | Chemical |
| Salinity, ppm CL | 2800 |
| Density / Viscosity | 9.4 57 |
| pH / Fluid Loss | 11.0 7.6 |
| Source of Sample | Flowline |
| Rm @ Meas. Temp | 0.9 @ 72 |
| Rmt @ Meas. Temp | 0.68 @ 72 |
| Rmc @ Meas. Temp | 1.22 @ 72 |
| Source of Rmf / Rmc | Charts |
| Rm @ BHT | 0.53 @ 123 |
| Operating Rig Time | 2.5 Hours |
| Max Rec. Temp. F | 123 |
| Equipment Number | P-24 |
| Location | Hays |
| Recorded By | T. Martin |
| Witnessed By | Sean Deenihan |

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest Wireline LLC will not be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

Rexford, KS, W on Hwy 24 to Rd 31,
N over tracks, W to location

Log Measured From: Kelly Bushing 5 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
785-625-3858

Your Midwest Wireline Crew

Engineer: T. Martin
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Sean Deenihan
Secondary Witness:
Secondary Witness:
Secondary Witness:

| Sensor | Offset (ft) | Schematic | Description | Length (ft) | O.D. (in) | Weight (lb) |
|--------------------|-------------------------|-----------|------------------|-------------|-----------|-------------|
| GR | 40.33 | | GR-M&W (106) | 3.00 | 3.50 | 50.00 |
| CNLSC CNSSC | 37.23 36.48 | | CNT-M&W (207-MW) | 5.00 | 3.50 | 100.00 |
| LSD DCAL SSD | 28.18 28.17 27.68 | | CDL-M&W (301-01) | 8.50 | 4.00 | 250.00 |
| MCAL MI MN | 19.58 19.58 19.58 | | ML-PSIML (402) | 7.58 | 4.00 | 65.00 |
| RLL3F RLL3 | 15.50 15.50 | | | | | |
| CILD | 8.33 | | DIL-M&W (507) | 18.25 | 3.50 | 220.00 |
| CILM | 4.50 | | | | | |
| SP | 0.20 | | | | | |

Dataset: carmen_dairy #1-13.db: field/well/StkMI/pass3.1
 Total length: 42.33 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\carmen_dairy #1-13.db
 Dataset field/well/StkMI/pass3.1/_vars_

Top - Bottom

| | | | | | | | |
|-----------|--------------|------------------|-------------------|----------------|------------------|-------|------------------|
| A | BOREID in | BOTTEMP degF | CASEOD in | CASETHCK in | FLUIDDEN g/cc | M | MATRXDEN g/cc |
| 1 | 7.875 | 123 | 5.5 | 0 | 1 | 2 | 2.71 |
| NPORSEL | PERFS | SNDERR mmho/m | SNDERRM mmho/m | SPSHIFT mV | SRFTEMP degF | SZCOR | TDEPTH ft |
| Limestone | 0 | 0 | 0 | 205 | 80 | Off | 4705 |

Variable Description

A : Cement Factor (a)
 BOREID : Borehole I.D.
 BOTTEMP : Bottom Hole Temperature
 CASEOD : Casing O.D.
 CASETHCK : Casing Thickness
 FLUIDDEN : Fluid Density
 M : Cement Exp (m)
 MATRXDEN : Matrix Density

NPORSEL : Neutron Porosity Curve Select
 PERFS : Perforation Flag
 SNDERR : Deep Sonde Error Correction
 SNDERRM : Medium Sonde Error Correction
 SPSHIFT : S.P. Baseline Offset
 SRFTEMP : Surface Temperature
 SZCOR : CN Size Cor. ?
 TDEPTH : Total Depth



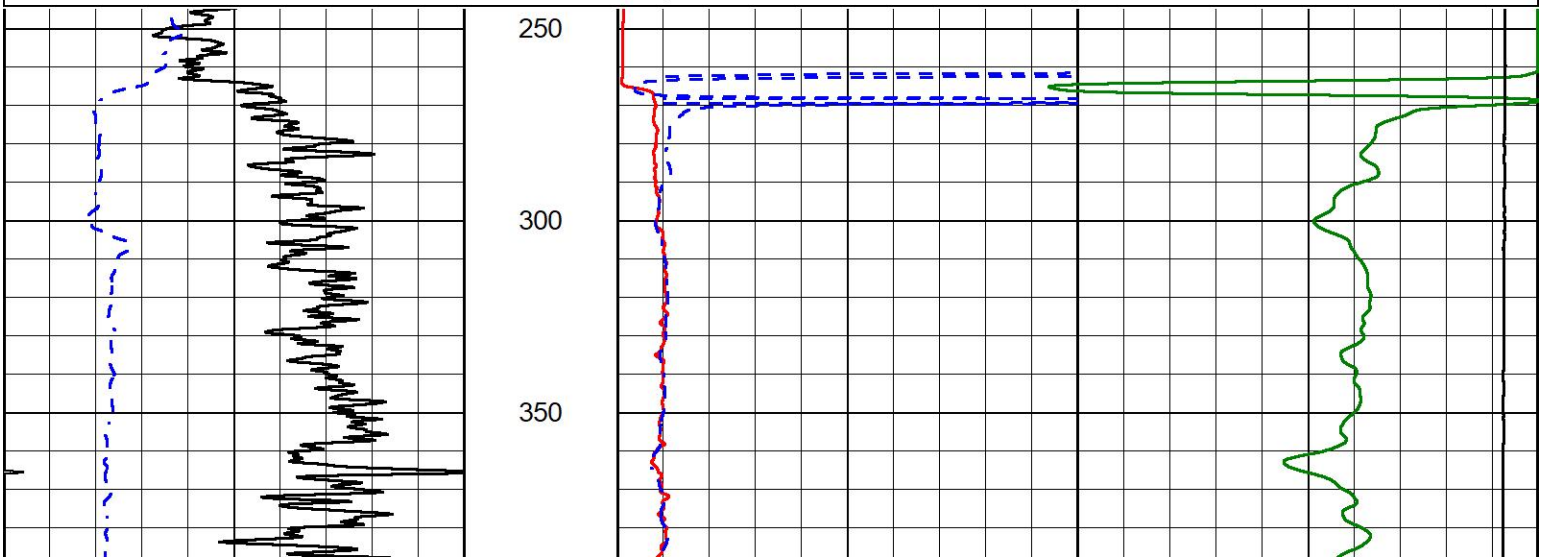
2" SCALE RESISTIVITY

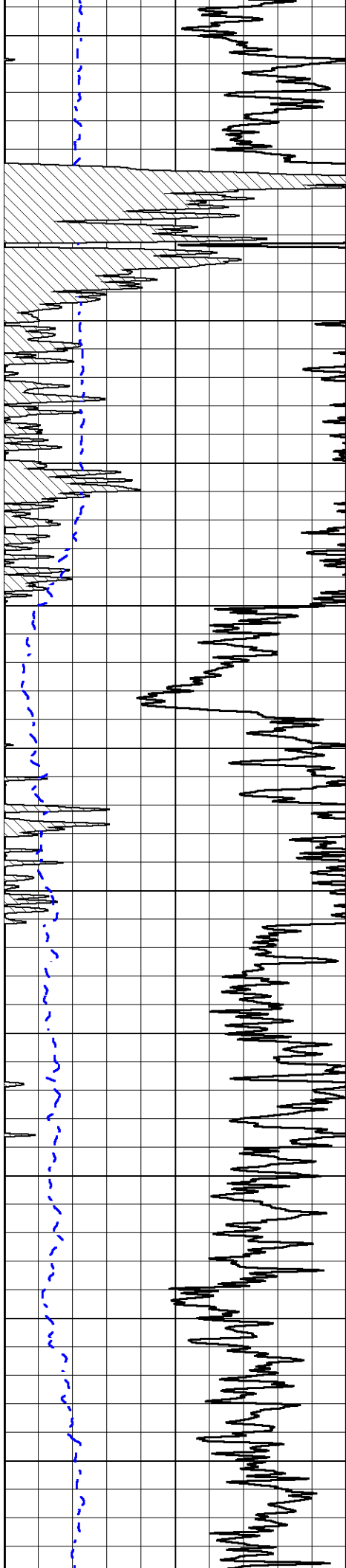
MAIN PASS

Database File carmen_dairy #1-13.db
 Dataset Pathname StkMI/pass3.2
 Presentation Format _dil2in
 Dataset Creation Sat Aug 06 12:04:41 2022
 Charted by Depth in Feet scaled 1:600

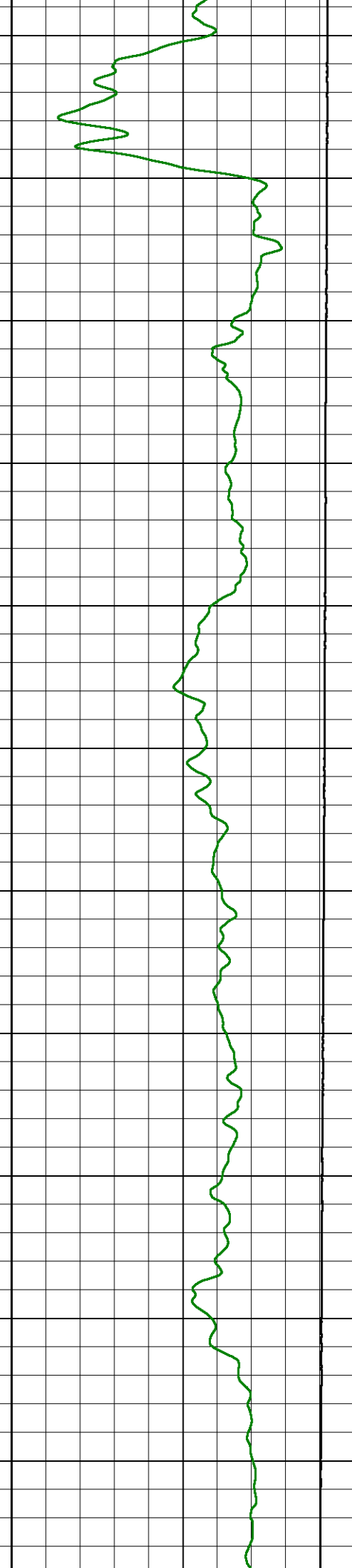
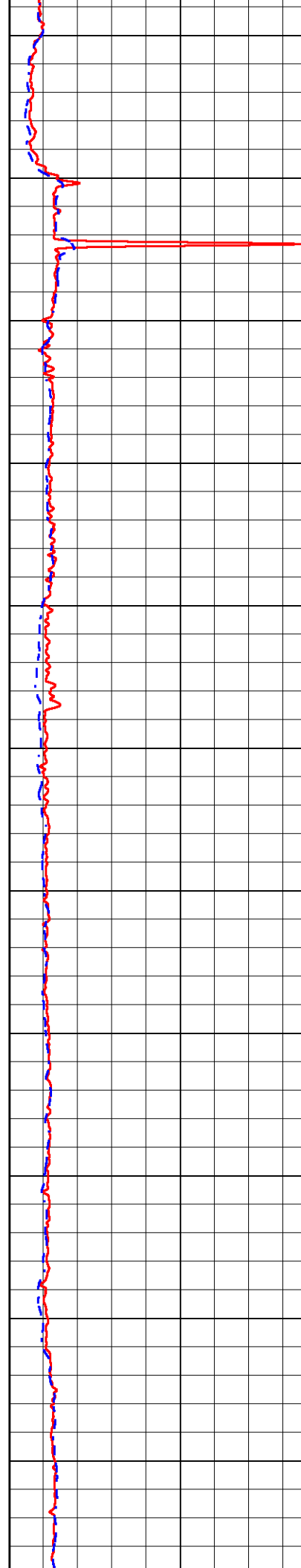
| | | |
|------|------------------|-----|
| 0 | Gamma Ray (GAPI) | 150 |
| -200 | SP (mV) | 0 |

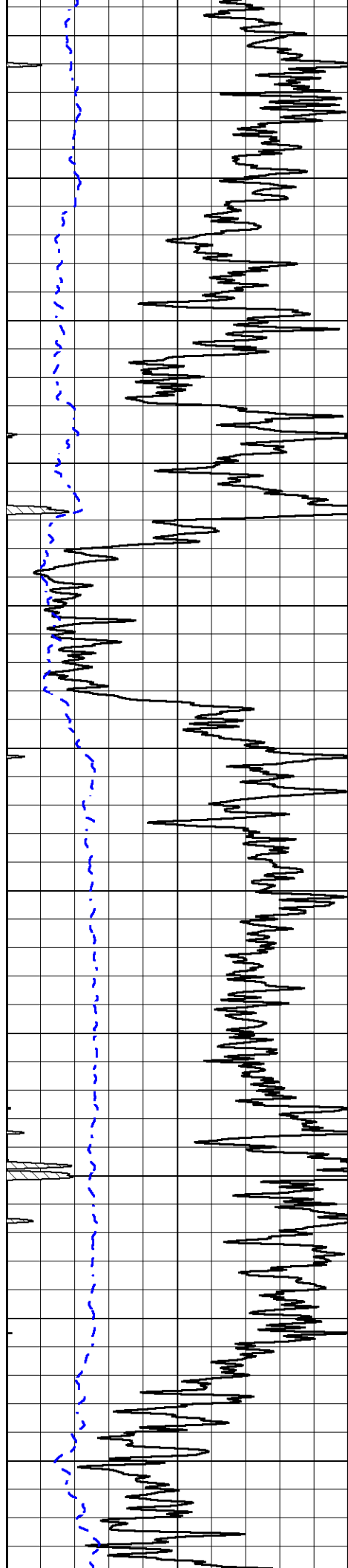
| | | |
|-------|-----------------------------|-----|
| 1000 | Conductivity (mmho/m) | 0 |
| 15000 | Line Tension (lb) | 0 |
| 0 | Shallow Resistivity (Ohm-m) | 50 |
| 0 | Deep Resistivity (Ohm-m) | 50 |
| 50 | Shallow Resistivity (Ohm-m) | 200 |
| 50 | Deep Resistivity (Ohm-m) | 200 |





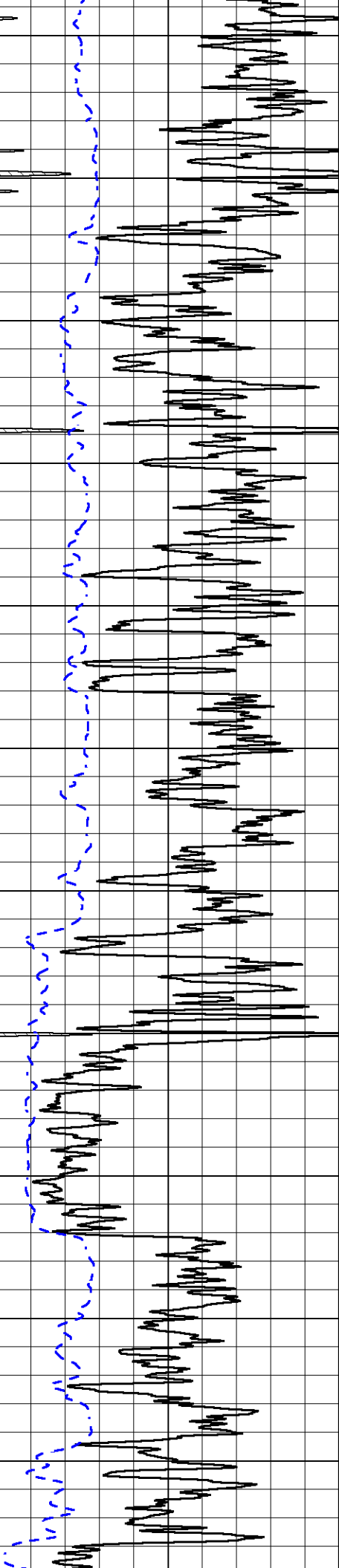
400
450
500
550
600
650
700
750
800
850
900



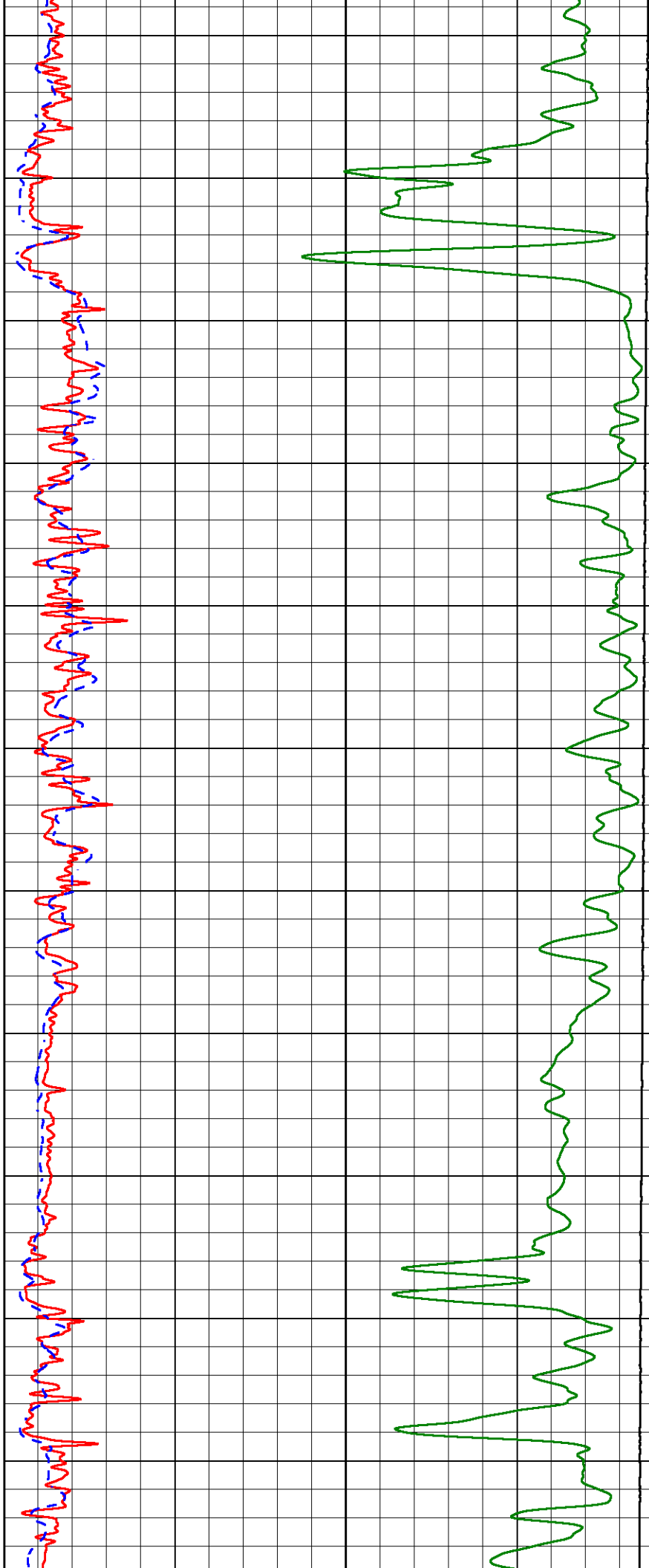


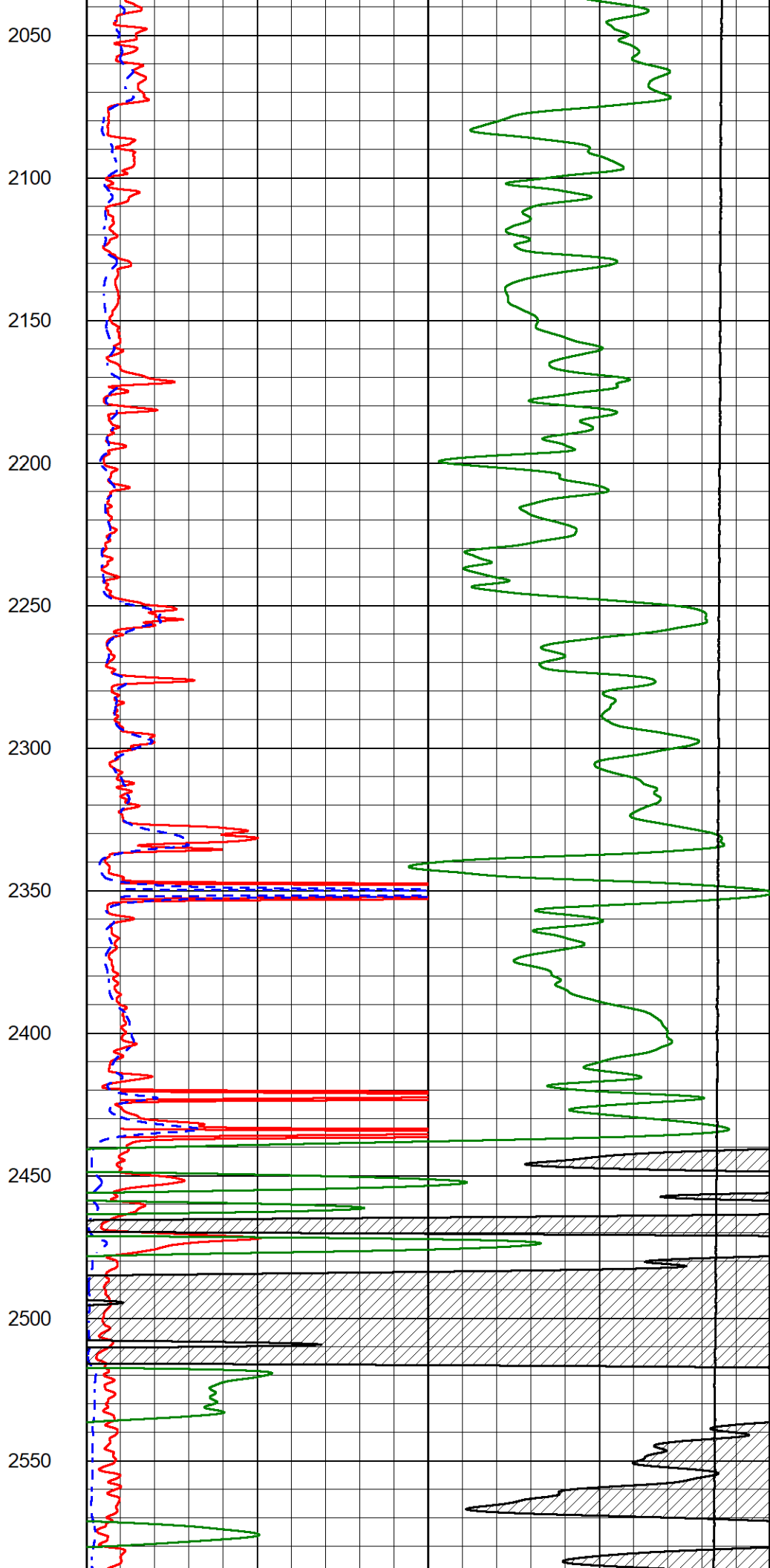
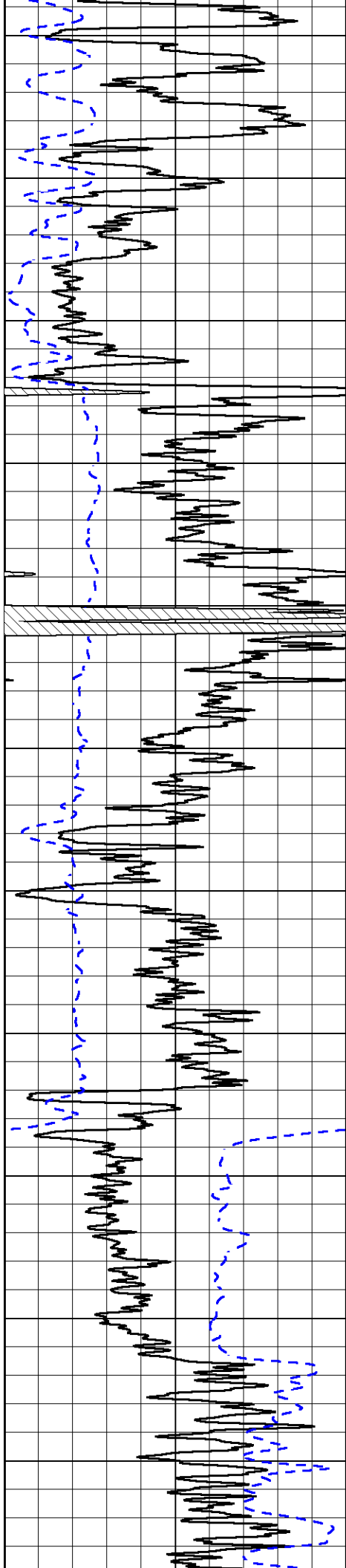
950
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450

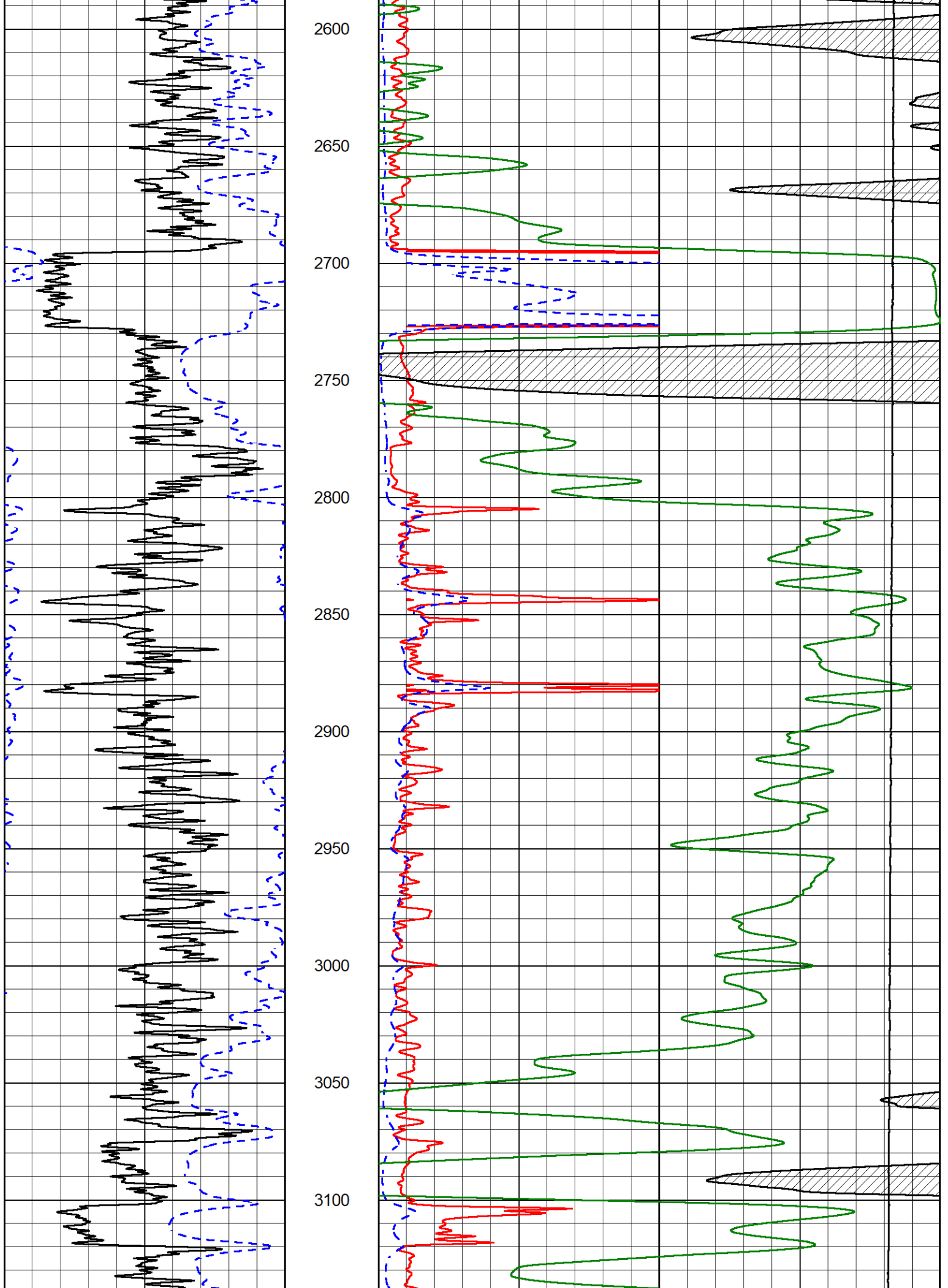


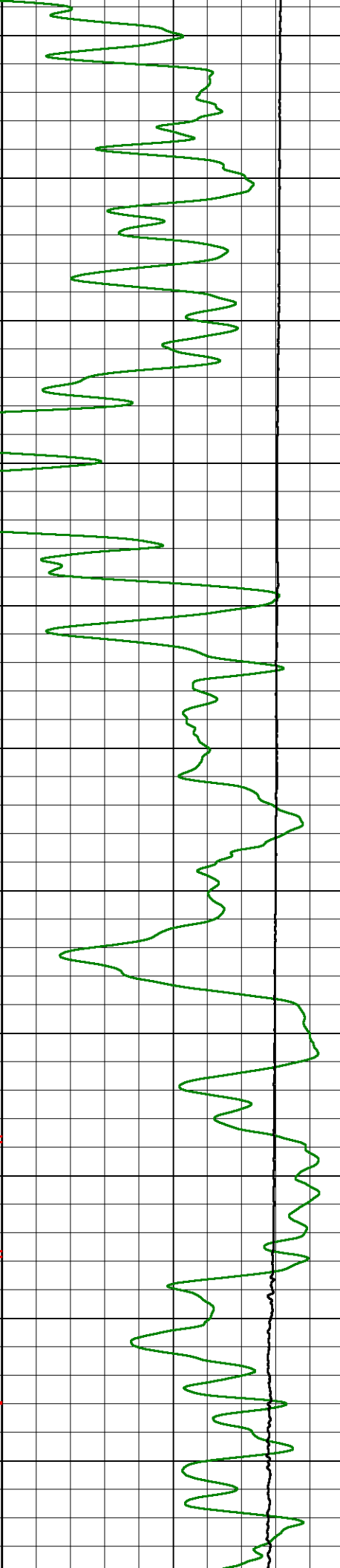
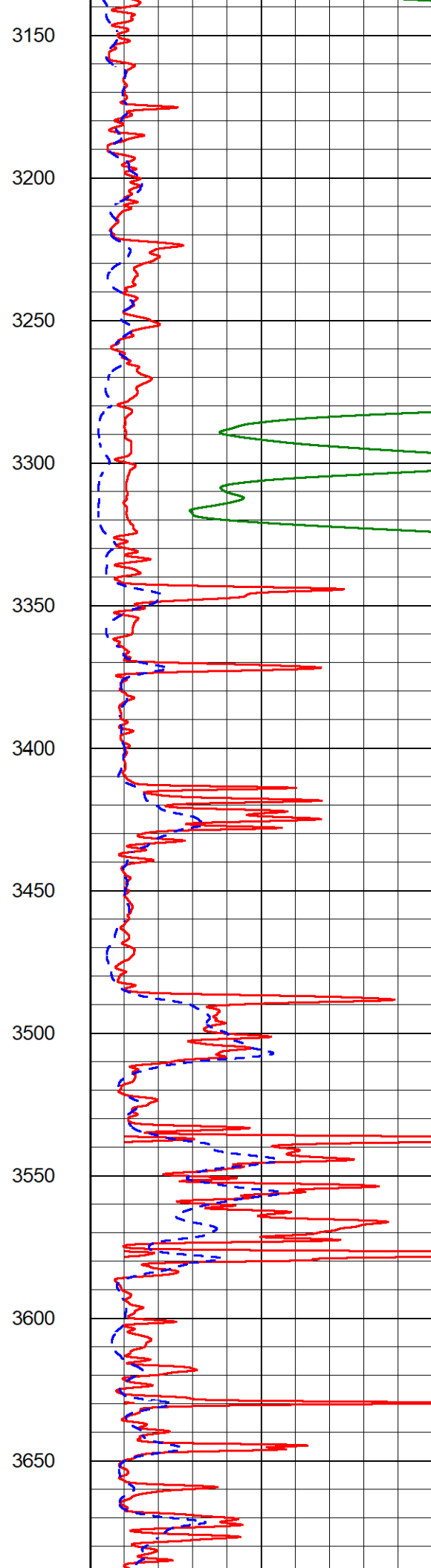
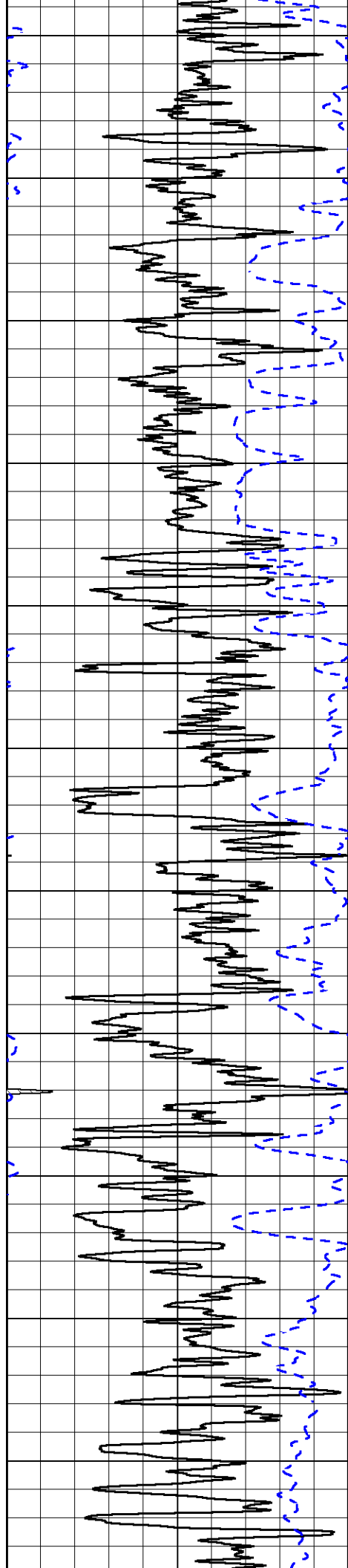


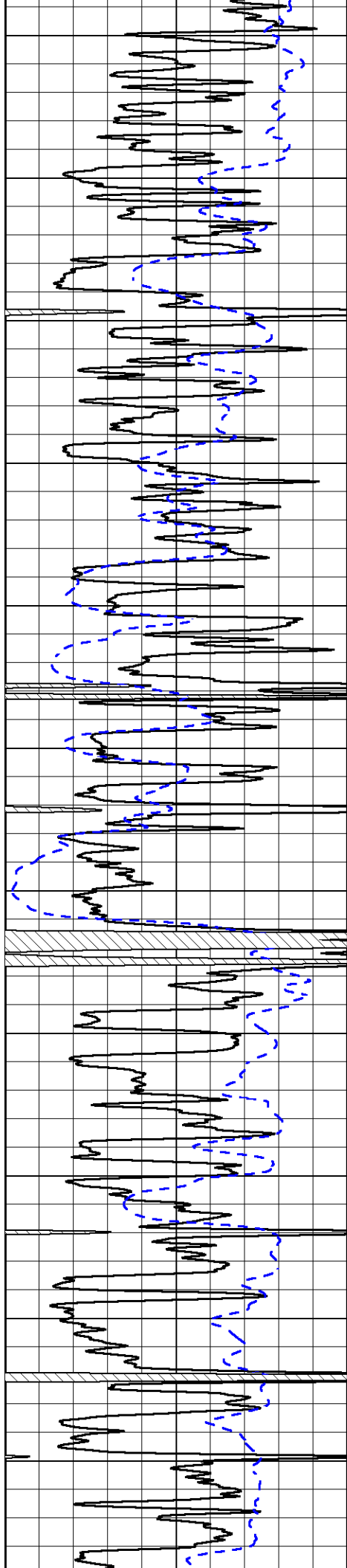
1500
1550
1600
1650
1700
1750
1800
1850
1900
1950
2000











3700

3750

3800

3850

3900

3950

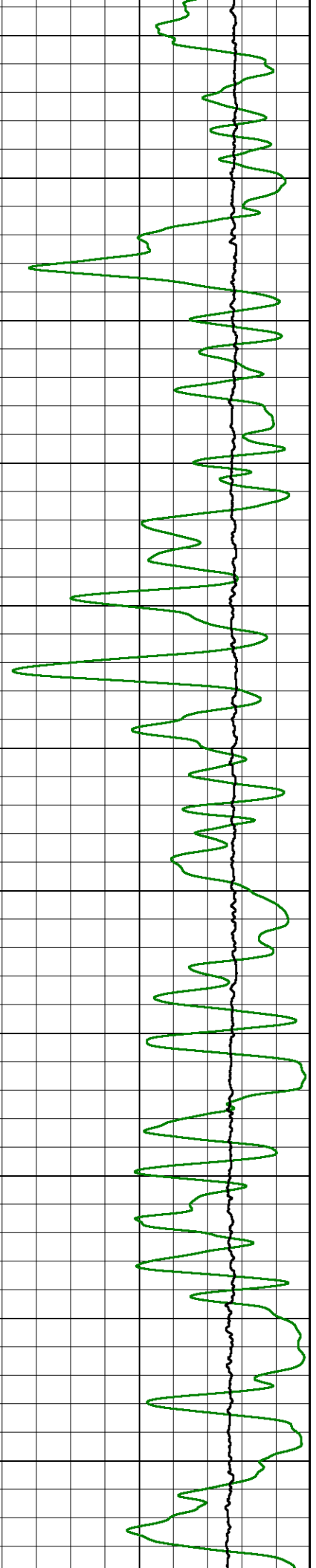
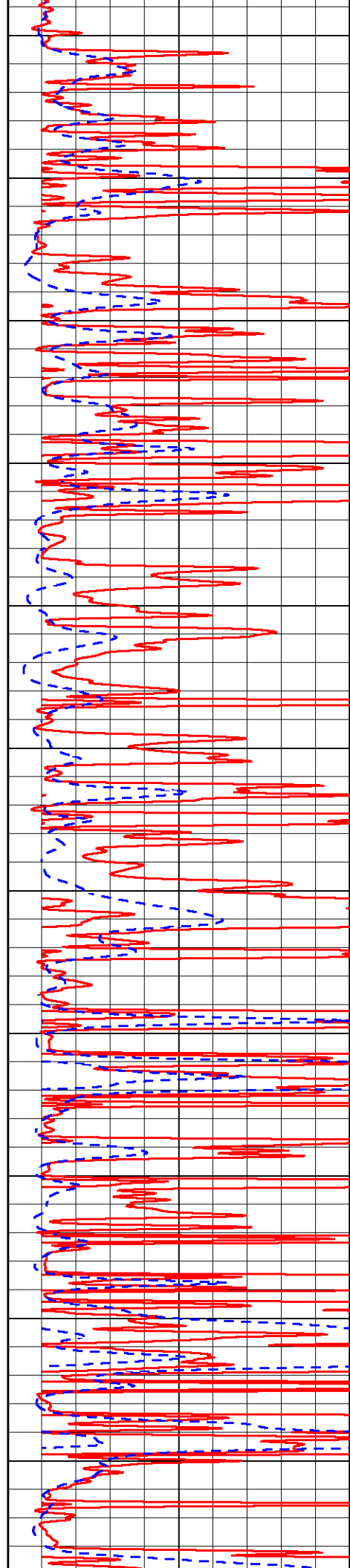
4000

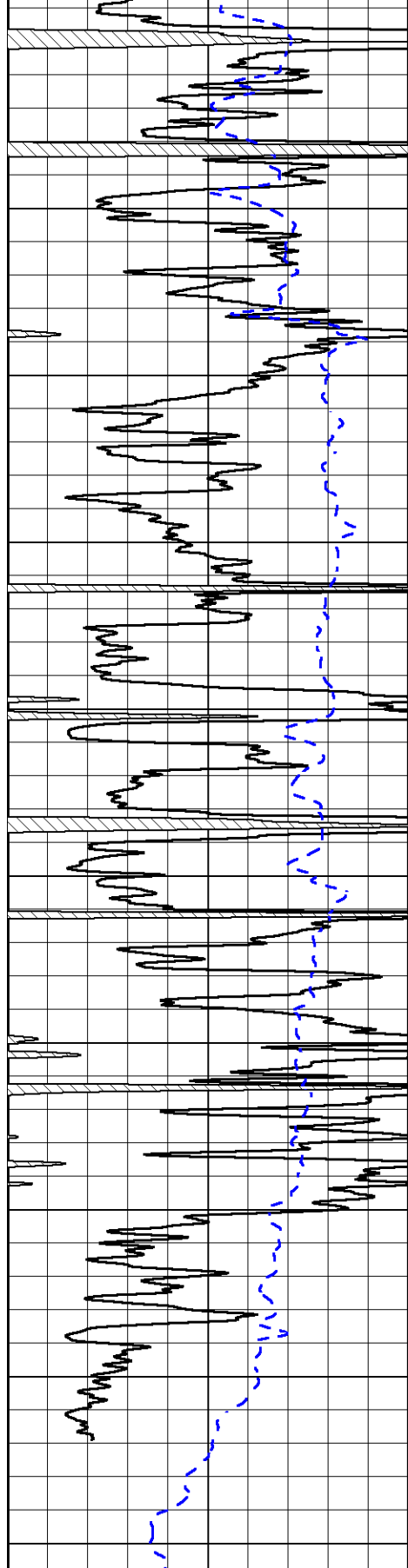
4050

4100

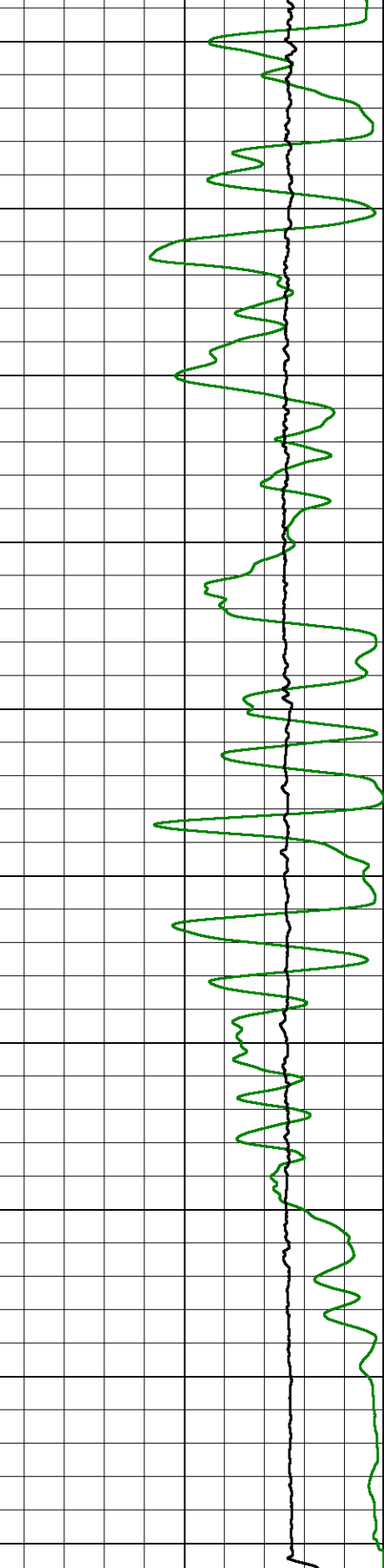
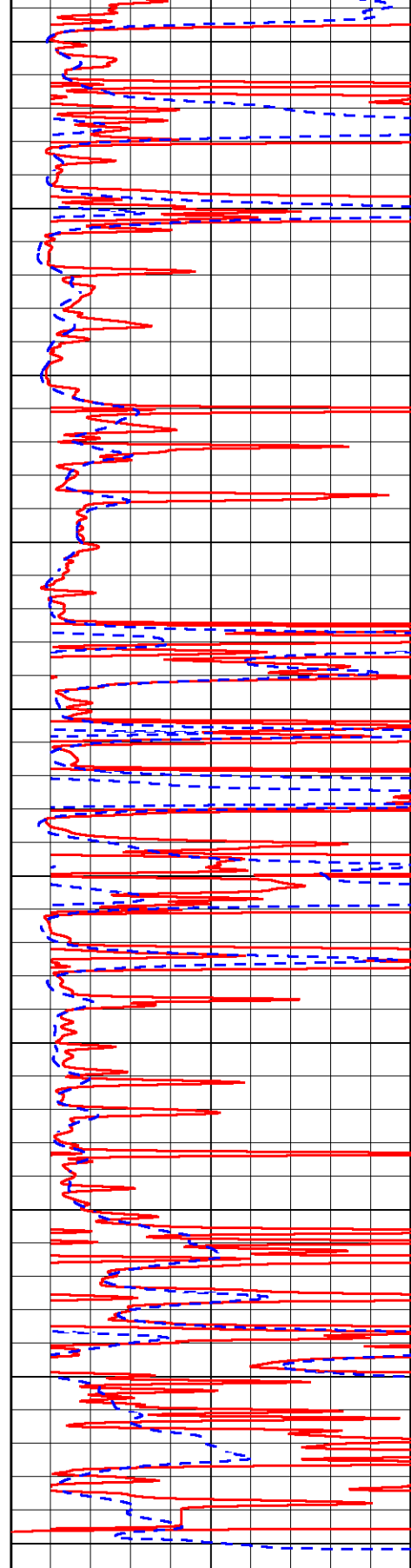
4150

4200





4250
4300
4350
4400
4450
4500
4550
4600
4650
4700



0 Gamma Ray (GAPI) 150

-200 SP (mV) 0

1000 Conductivity (mmho/m) 0

15000 Line Tension (lb) 0

0 Shallow Resistivity (Ohm-m) 50

0 Deep Resistivity (Ohm-m) 50

Shallow Resistivity

50 (Ohm-m) 200

50 Deep Resistivity (Ohm-m) 200



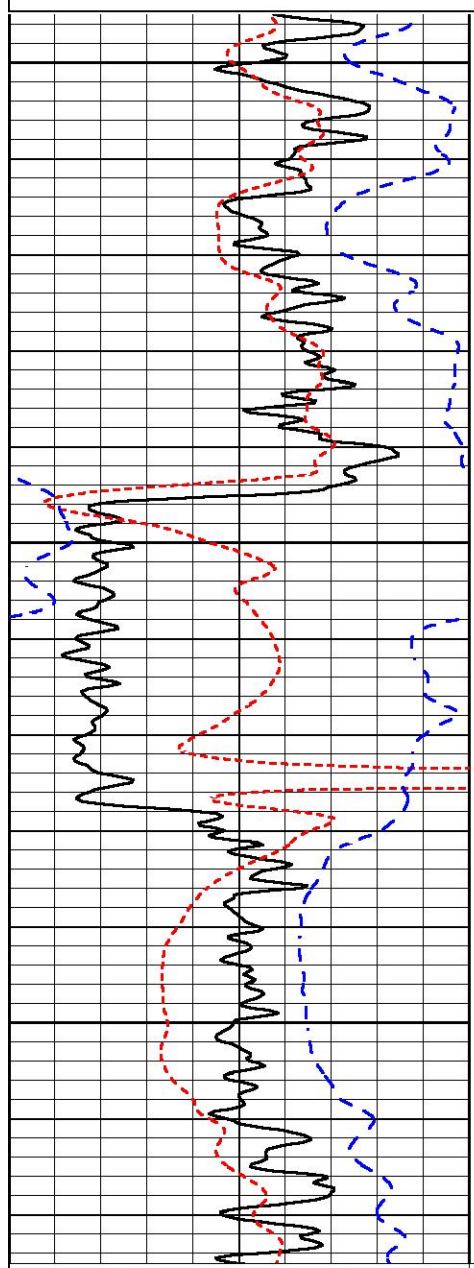
ANHYDRITE SECTION

MAIN PASS

Database File carmen_dairy #1-13.db
 Dataset Pathname StkMI/pass3.4
 Presentation Format _dil
 Dataset Creation Sat Aug 06 11:39:02 2022
 Charted by Depth in Feet scaled 1:240

| | | |
|------|------------------|-----|
| 0 | Gamma Ray (GAPI) | 150 |
| -160 | RXORT | 40 |
| -200 | SP (mV) | 0 |

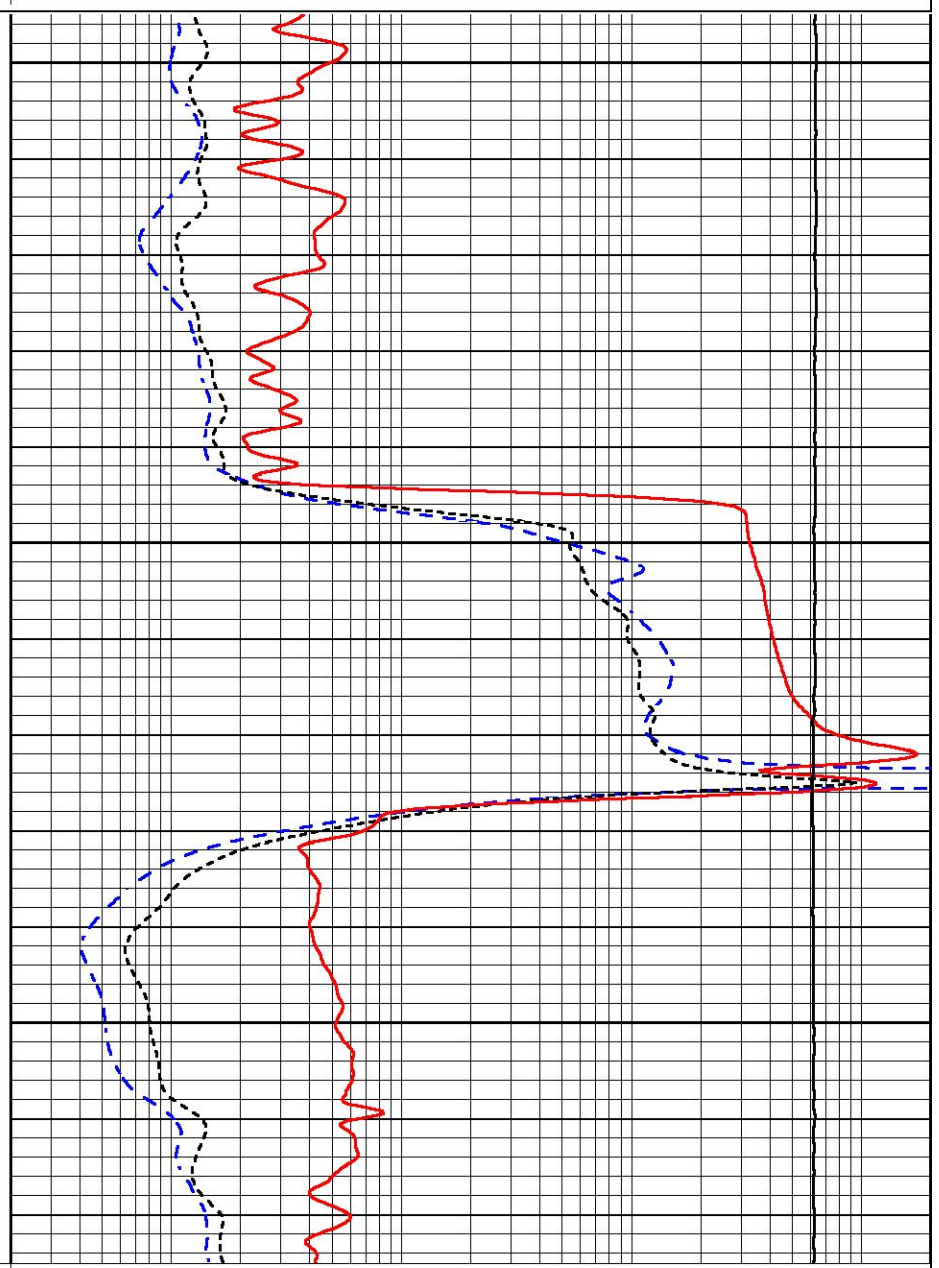
| | | |
|-------|----------------------------|------|
| 0.2 | Deep Resistivity (Ohm-m) | 2000 |
| 0.2 | Medium Resistivity (Ohm-m) | 2000 |
| 0.2 | RLL3 (Ohm-m) | 2000 |
| 10000 | Line Tension (lb) | 0 |



2650

2700

2750



| | | |
|------|------------------|-----|
| 0 | Gamma Ray (GAPI) | 150 |
| -160 | RXORT | 40 |
| -200 | SP (mV) | 0 |

| | | |
|-------|----------------------------|------|
| 0.2 | Deep Resistivity (Ohm-m) | 2000 |
| 0.2 | Medium Resistivity (Ohm-m) | 2000 |
| 0.2 | RLL3 (Ohm-m) | 2000 |
| 10000 | Line Tension (lb) | 0 |



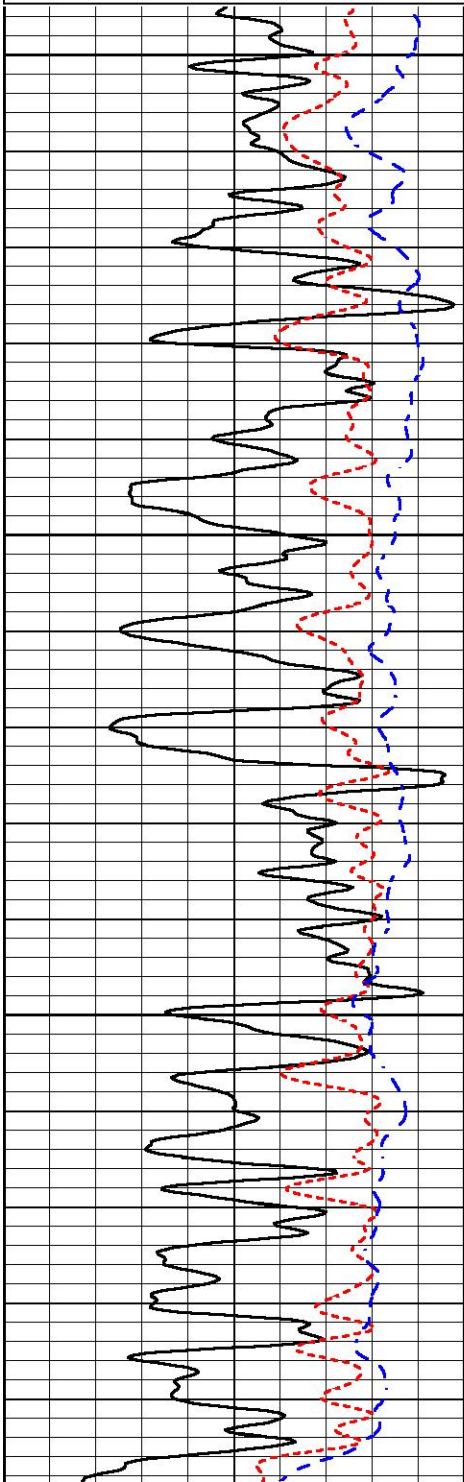
DETAIL SECTION

MAIN PASS

Database File carmen_dairy #1-13.db
 Dataset Pathname StkMI/pass3.1
 Presentation Format _dil
 Dataset Creation Sat Aug 06 12:04:53 2022
 Charted by Depth in Feet scaled 1:240

| | | |
|------|------------------|-----|
| 0 | Gamma Ray (GAPI) | 150 |
| -160 | RXORT | 40 |
| -200 | SP (mV) | 0 |

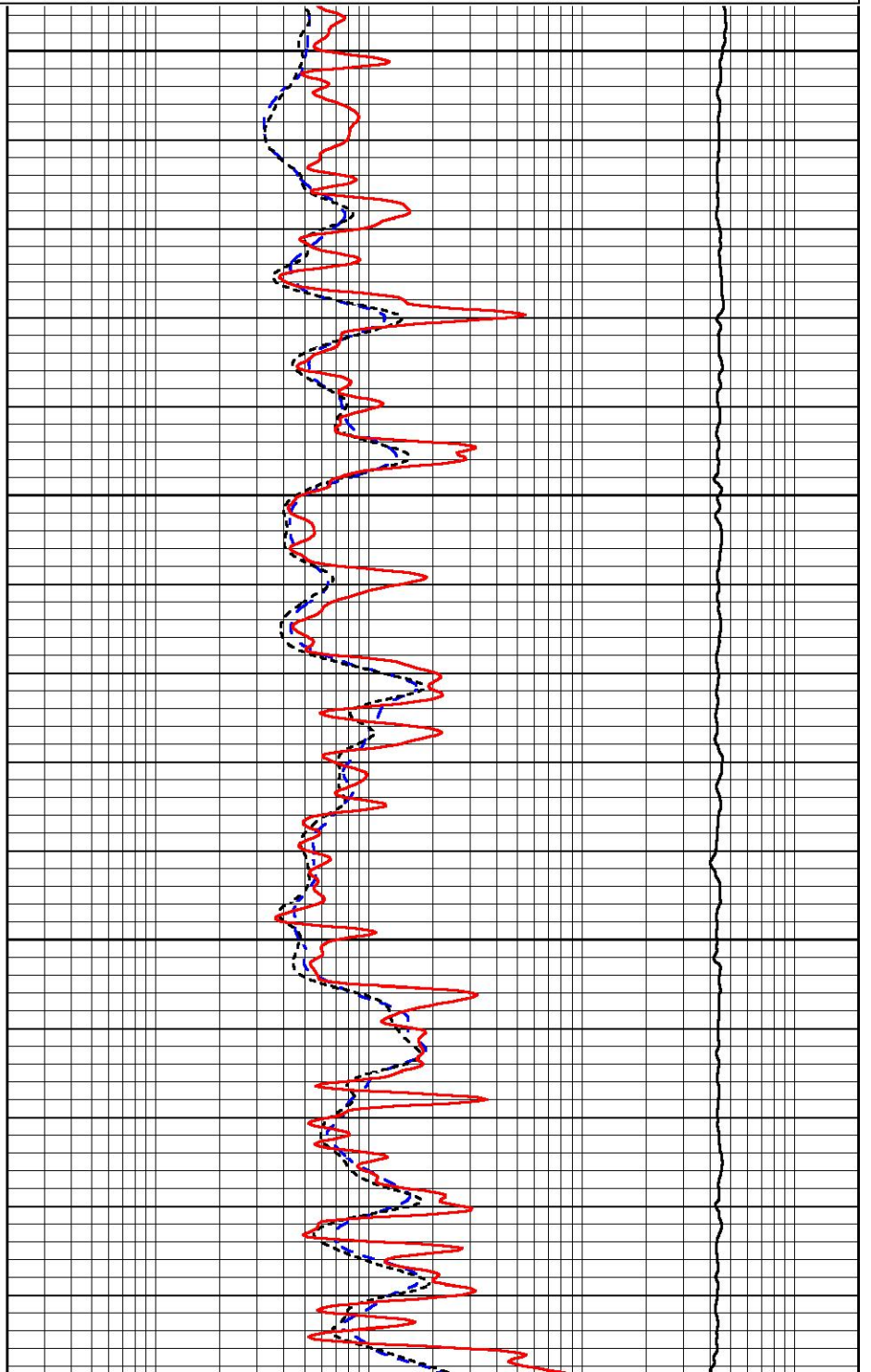
| | | |
|-------|----------------------------|------|
| 0.2 | Deep Resistivity (Ohm-m) | 2000 |
| 0.2 | Medium Resistivity (Ohm-m) | 2000 |
| 0.2 | RLL3 (Ohm-m) | 2000 |
| 10000 | Line Tension (lb) | 0 |

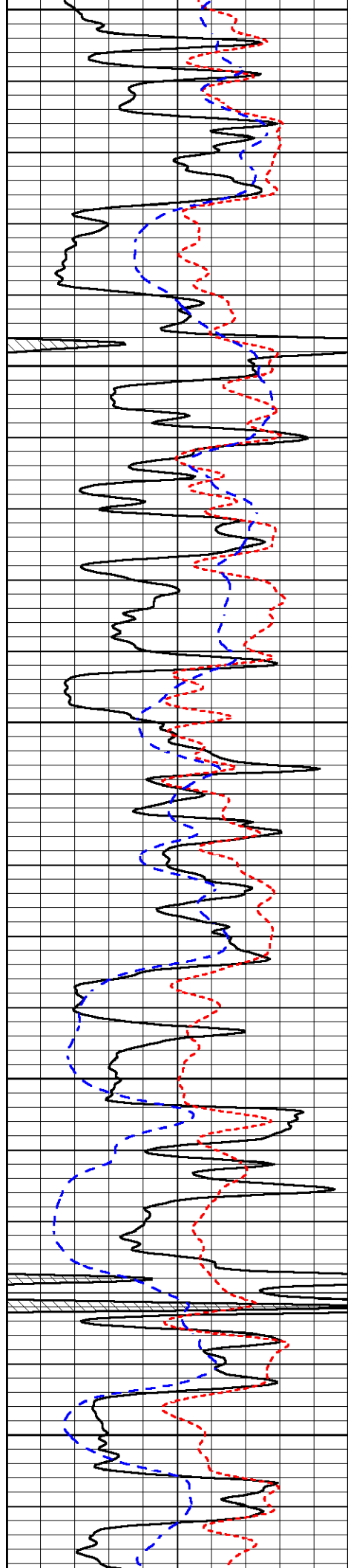


3600

3650

3700





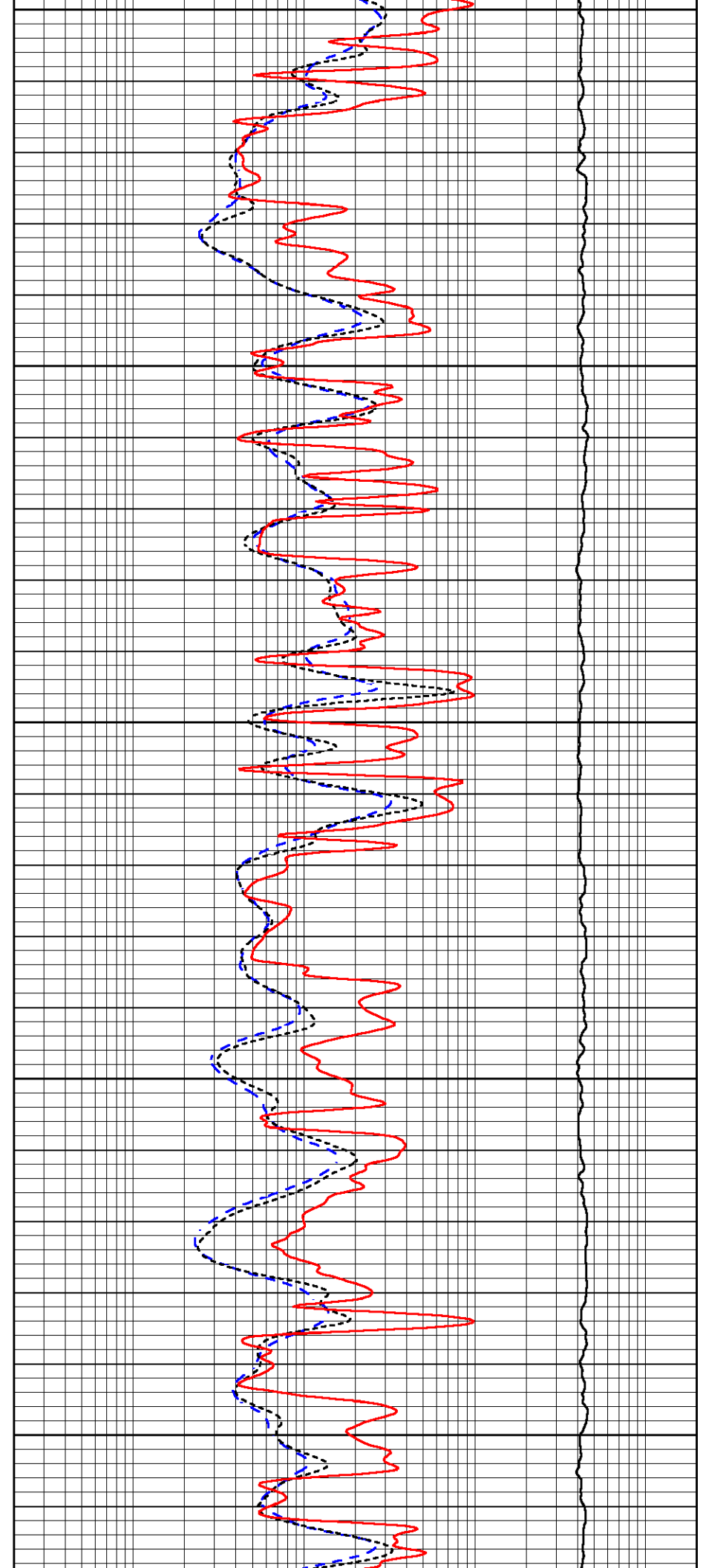
3750

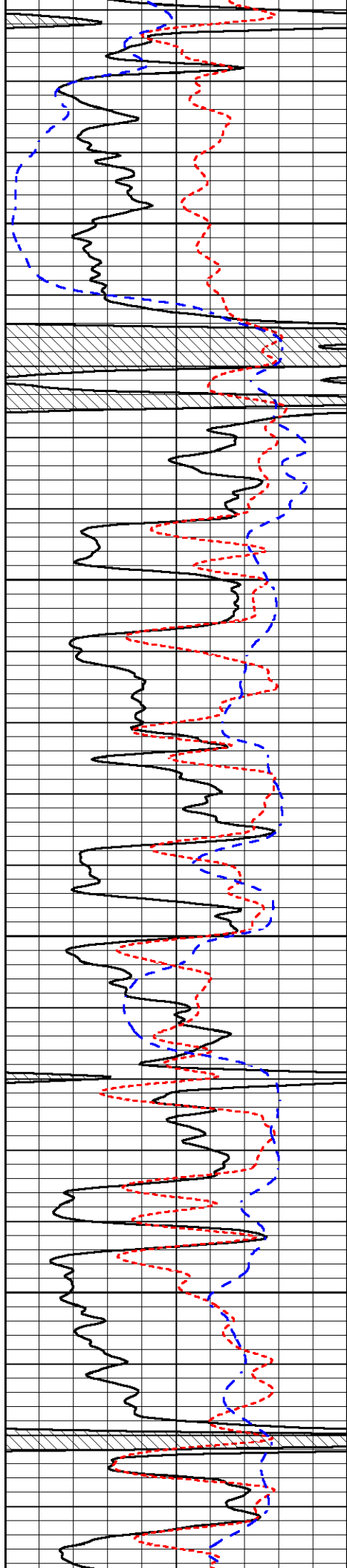
3800

3850

3900

3950



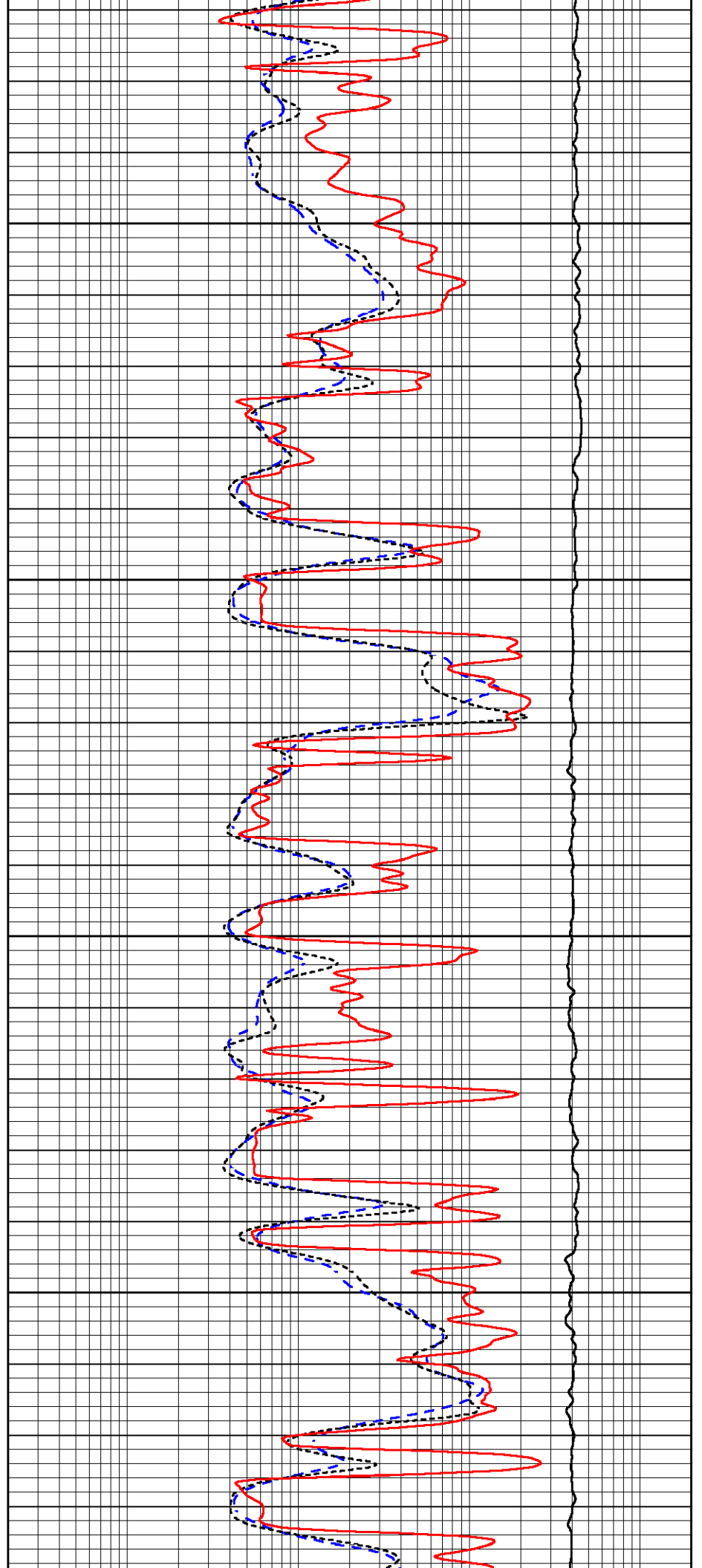


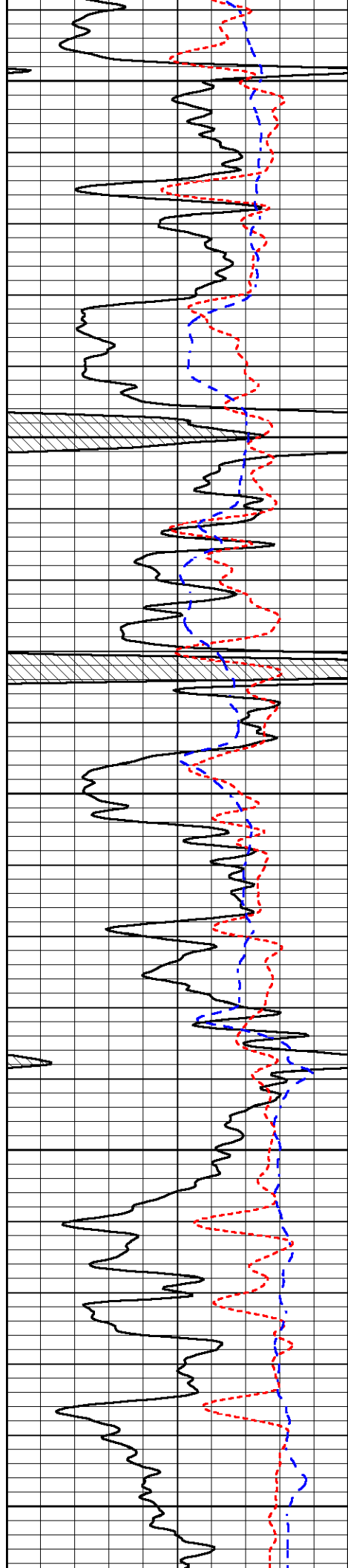
4000

4050

4100

4150





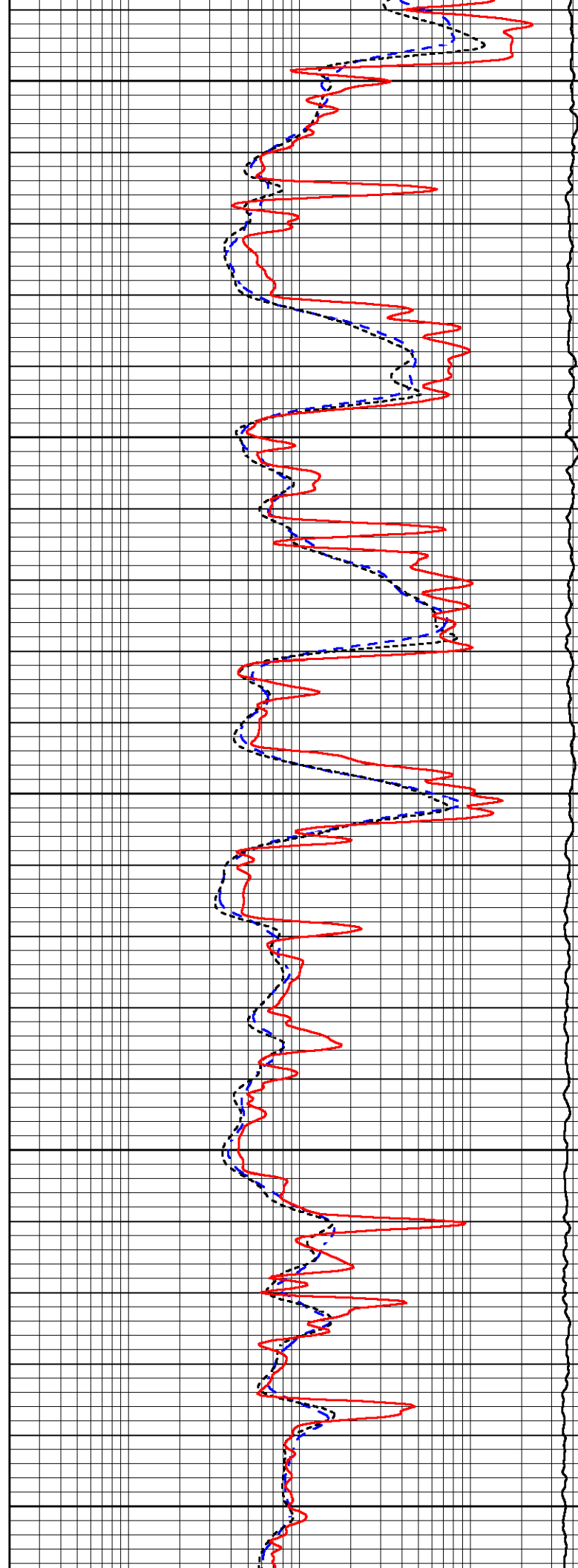
4200

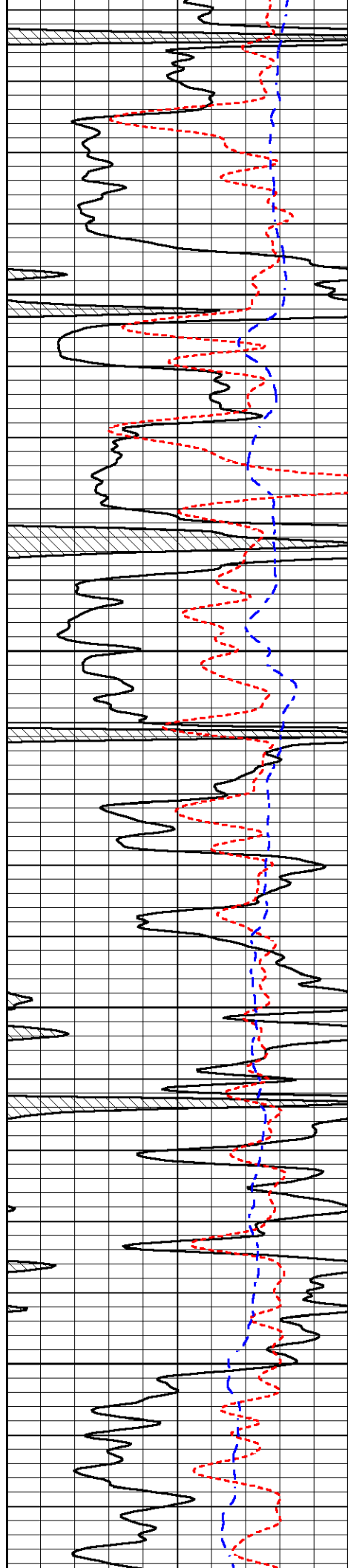
4250

4300

4350

4400



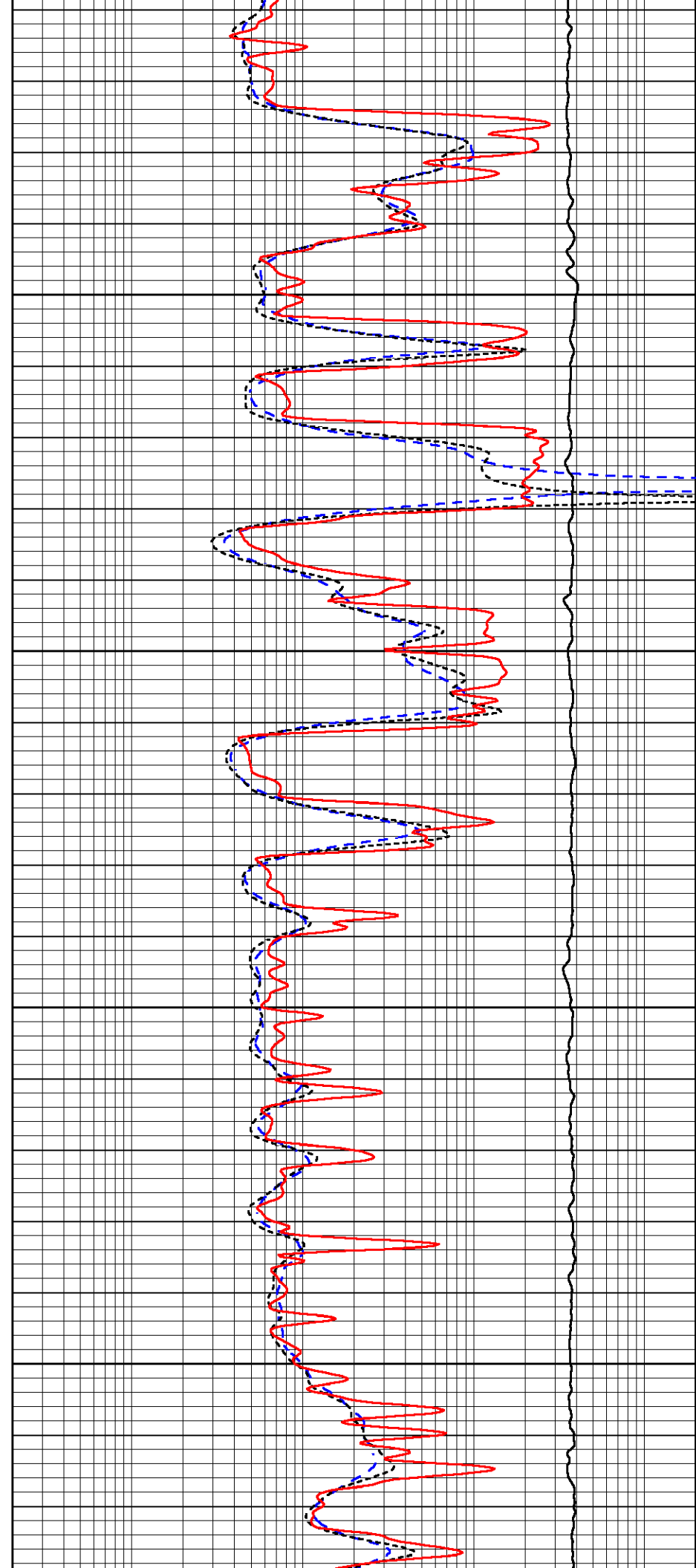


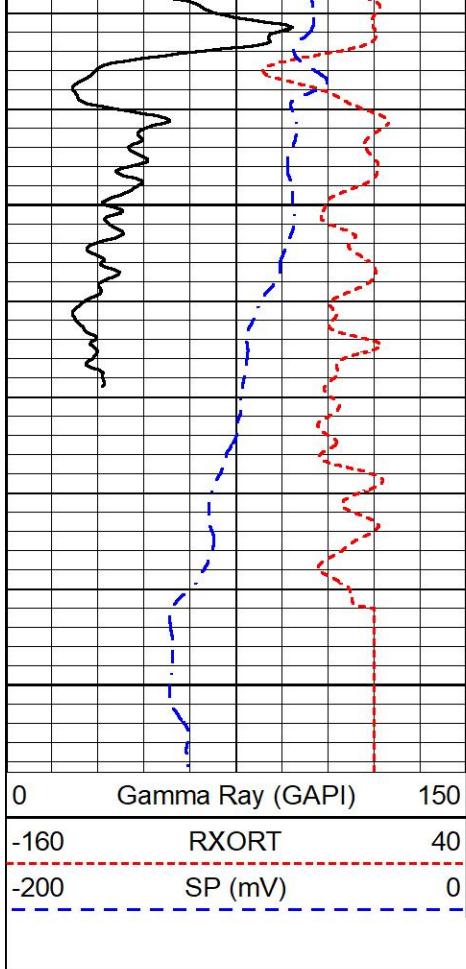
4450

4500

4550

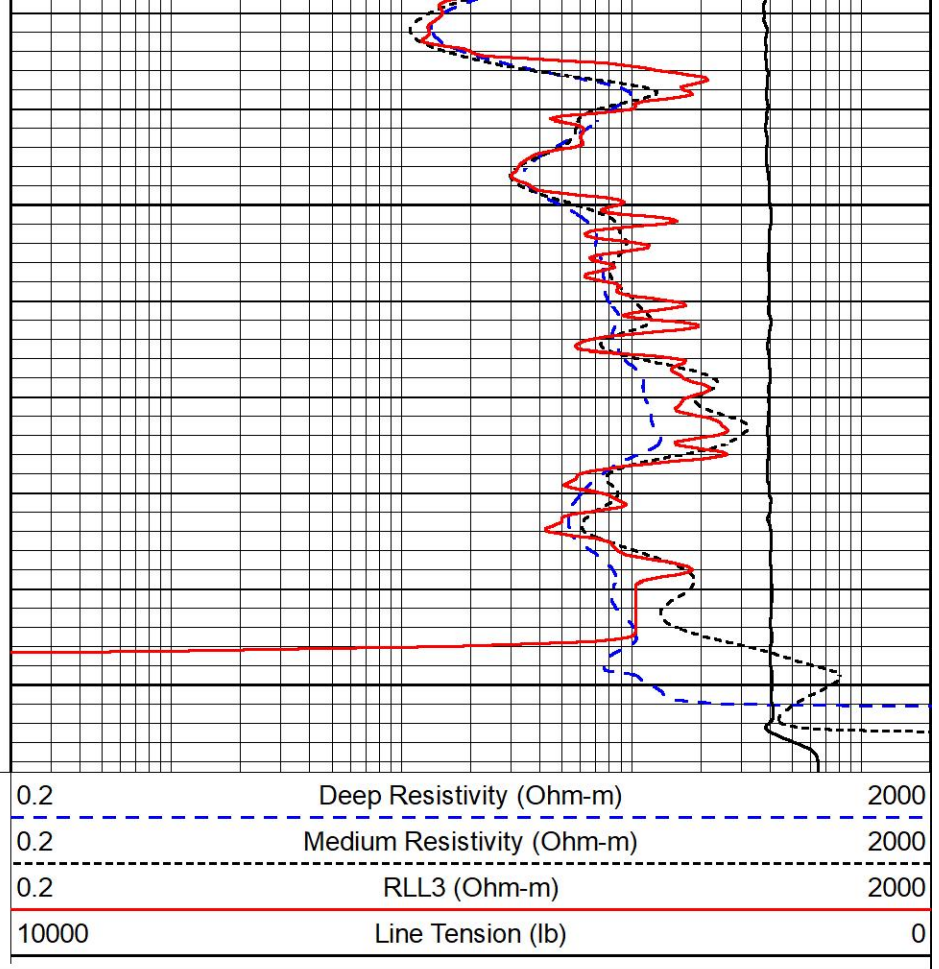
4600





4650

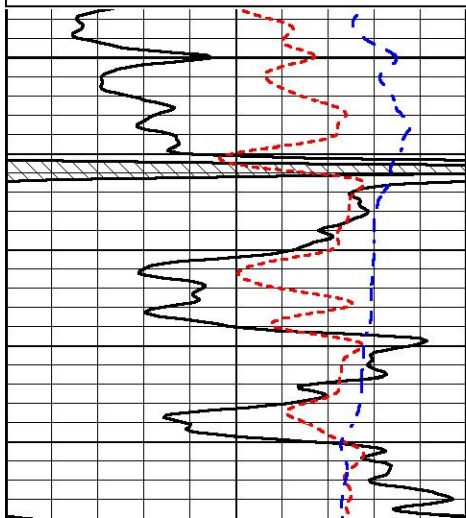
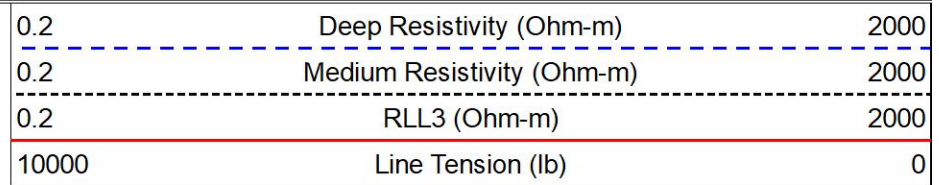
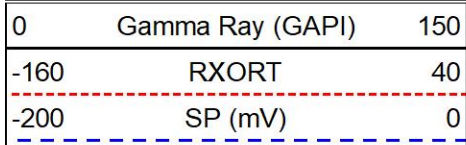
4700



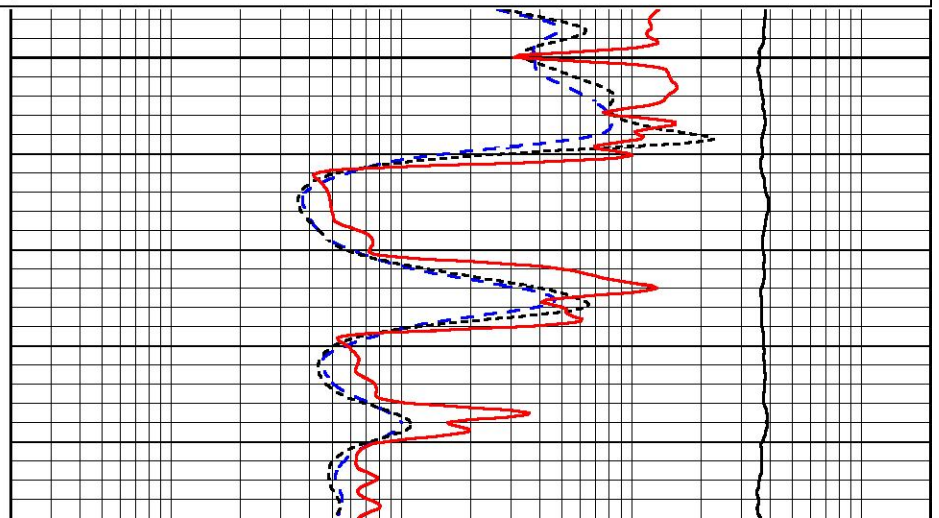
REPEAT SECTION

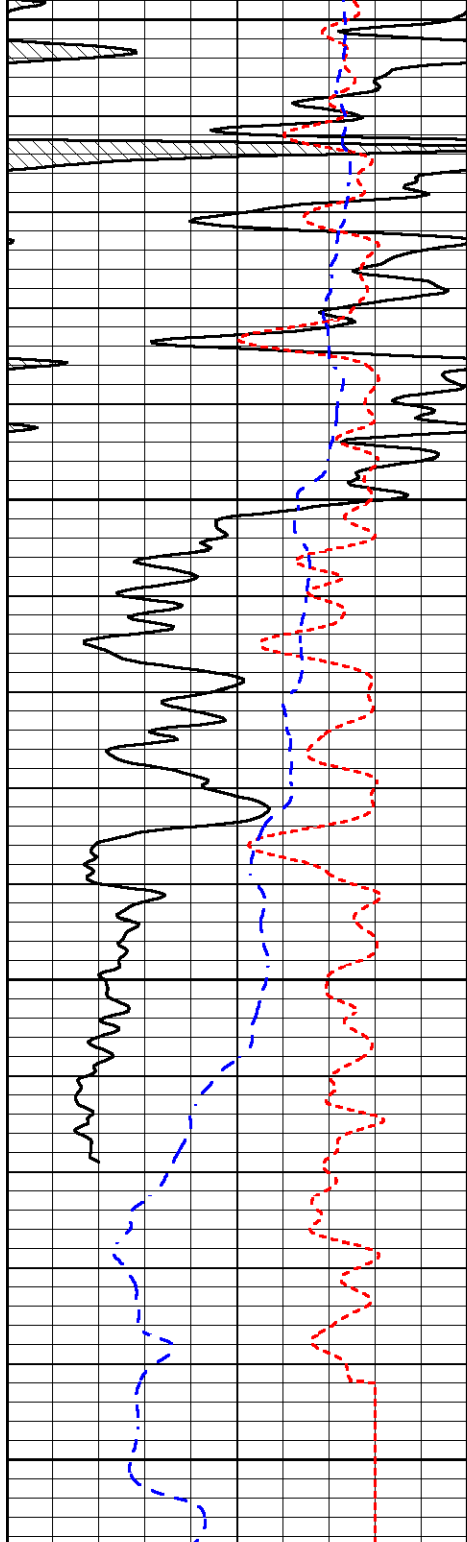
REPEAT PASS

Database File carmen_dairy #1-13.db
 Dataset Pathname StkMI/pass2.1
 Presentation Format _dil
 Dataset Creation Sat Aug 06 11:21:43 2022
 Charted by Depth in Feet scaled 1:240

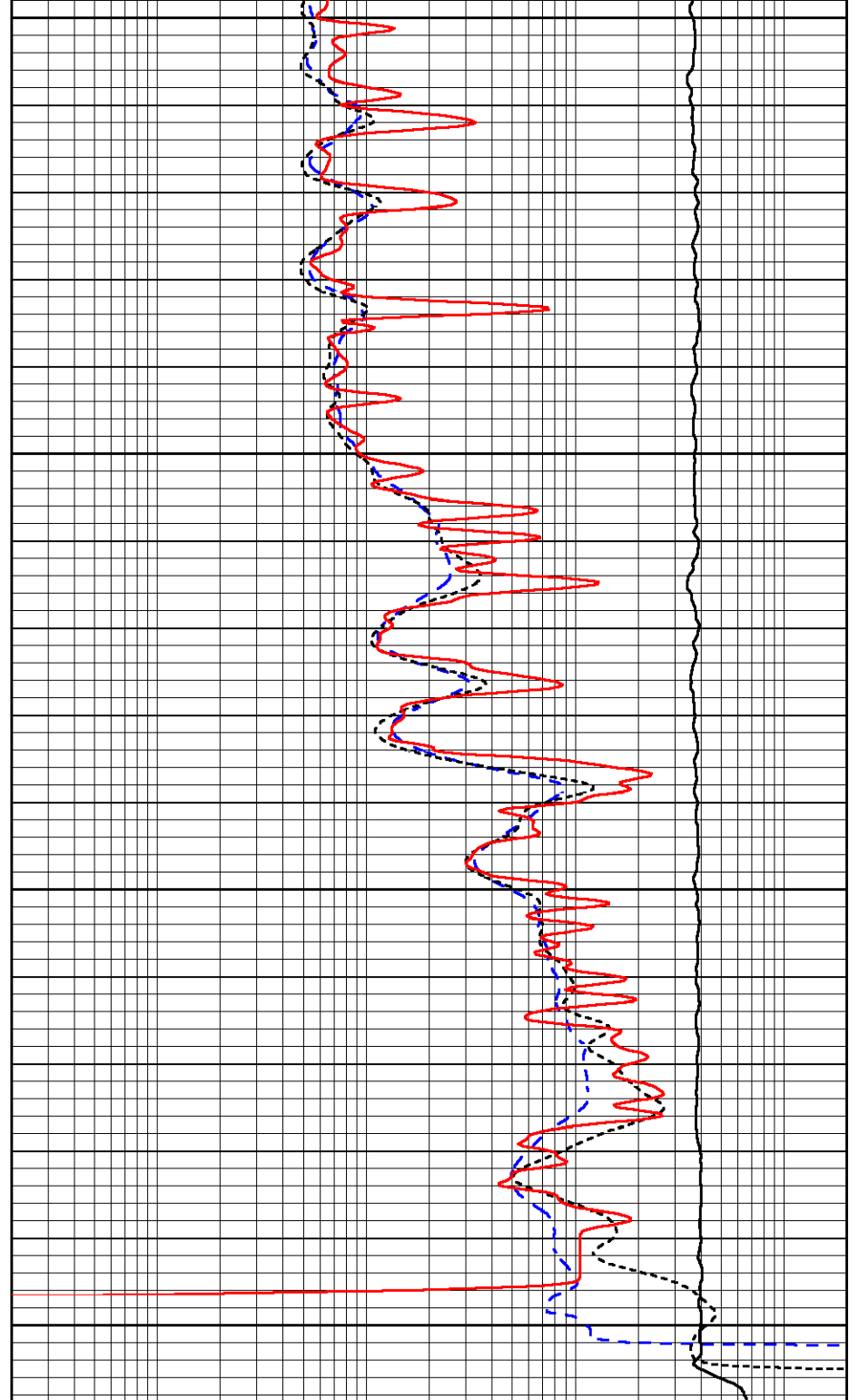


4500





4550
4600
4650
4700



| | | |
|------|------------------|-----|
| 0 | Gamma Ray (GAPI) | 150 |
| -160 | RXORT | 40 |
| -200 | SP (mV) | 0 |

| | | |
|-------|----------------------------|------|
| 0.2 | Deep Resistivity (Ohm-m) | 2000 |
| 0.2 | Medium Resistivity (Ohm-m) | 2000 |
| 0.2 | RLL3 (Ohm-m) | 2000 |
| 10000 | Line Tension (lb) | 0 |

Calibration Report

Database File: carmen_dairy #1-13.db
 Dataset Pathname: StkMI/pass3.1
 Dataset Creation: Sat Aug 06 12:04:53 2022

Dual Induction Calibration Report

Serial-Model: 507-M&W
 Surface Cal Performed: Wed Aug 3 13:14:16 2022

| Loop: | Readings | | References | | | Results | |
|--------|----------|---------|------------|---------|--------|---------|---------|
| | Air | Loop | Air | Loop | | m | b |
| Deep | 82.972 | 482.449 | 0.000 | 255.800 | mmho/m | 0.590 | -32.000 |
| Medium | 120.285 | 668.174 | 0.000 | 255.800 | mmho/m | 0.517 | -59.000 |

Microlog Calibration Report

Serial-Model: 402-PSIML
 Performed: Sun Jul 17 13:11:21 2022

| | Readings | | References | | | Results | |
|---------|----------|--------|------------|---------|-------|------------|----------|
| | Zero | Cal | Zero | Cal | | m | b |
| Normal | 0.0000 | 1.0000 | 0.0000 | 1.0000 | Ohm-m | 19000.0000 | -1.0000 |
| Inverse | 0.0000 | 1.0000 | 0.0000 | 1.0000 | Ohm-m | 24000.0000 | -0.8000 |
| Caliper | 1.0052 | 1.0858 | 5.0000 | 16.5000 | in | 65.0000 | -59.8500 |

Compensated Density Calibration Report

Serial-Model: 301-01-M&W
 Source #: 20762B
 Master Calibration Performed: Thu Feb 3 00:43:14 2022

Master Calibration

| | Density | | Far Detector | Near Detector | |
|---------------------|---------|------|-----------------------------|---------------|-----|
| Magnesium | 1.755 | g/cc | 3559.05 | 2566.81 | cps |
| Aluminum | 2.675 | g/cc | 664.63 | 1636.12 | cps |
| Spine Angle = 74.98 | | | Density/Spine Ratio = 0.530 | | |
| | Size | | Reading | | |
| Small Ring | 8.00 | in | 1.16 | | |
| Large Ring | 13.00 | in | 1.02 | | |

Compensated Neutron Calibration Report

Serial Number: 207-MW
 Tool Model: M&W

CALIBRATION

| Detector | Readings | Target | Normalization |
|-------------|-------------|-------------|---------------|
| Short Space | 6240.00 cps | 1000.00 cps | 1.6025 |
| Long Space | 460.00 cps | 1000.00 cps | 1.9500 |

PRE-SURVEY VERIFICATION

| | Detector | Readings | Measured | Target |
|----|-------------|----------|----------|--------|
| 1) | Short Space | cps | | |
| | Long Space | cps | pu | pu |
| 2) | Short Space | cps | | |
| | Long Space | cps | pu | |
| 3) | Short Space | cps | | |

Long Space

cps

pu

POST-SURVEY VERIFICATION

| | Detector | Readings | Measured | Target |
|----|---------------------------|------------|----------|--------|
| 1) | Short Space Long Space | cps cps | pu | pu |
| 2) | Short Space Long Space | cps cps | pu | pu |
| 3) | Short Space Long Space | cps cps | pu | pu |

Gamma Ray Calibration Report

Serial Number: 106
 Tool Model: M&W
 Performed: Fri Dec 3 15:10:46 2021

Calibrator Value: 500.0 GAPI

Background Reading: 24.0 cps
 Calibrator Reading: 637.0 cps

Sensitivity: 0.5500 GAPI/cps



Company Carmen Schmitt, Inc.
 Well Dairy #1-13
 Field
 County Thomas
 State Kansas